

REMARKS

Claims 1, 3 through 6, and 12 through 17 are currently pending in the application, of which claims 1, and 3 through 6 are currently under examination. Claims 12 through 17 are withdrawn from consideration as being drawn to a non-elected invention.

This amendment is in response to the Office Action of May 29, 2007.

Information Disclosure Statements

Applicant notes the filing of Information Disclosure Statements herein on May 23, 2006 and September 5, 2006 and notes that copies of the PTO/SB/08A were not returned with the outstanding Office Action. Applicant respectfully requests that the information cited on the PTO/SB/08A forms be made of record herein.

35 U.S.C. § 103(a) Obviousness Rejections

Obviousness Rejection Based on Bohr (U.S. Patent No. 6,617,681) in view of Applicant's Admitted Prior Art (AAPA) in view of Beer et al. (EP472768A) and Miyashita (JP 11006073A)

Claims 1, and 3 through 6 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Bohr (U.S. Patent No. 6,617,681) in view of Applicant's Admitted Prior Art (AAPA) in view of Beer et al. (EP472768A) and Miyashita (JP 11006073A). Applicant respectfully traverses this rejection, as hereinafter set forth.

Applicant asserts that to establish a *prima facie* case of obviousness under 35 U.S.C. § 103 three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Third, the cited prior art reference must teach or suggest all of the claim limitations. Furthermore, the suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on Applicant's disclosure.

After carefully considering the cited prior art, the rejections, and the Examiner's comments, Applicant has amended the claimed invention to clearly distinguish over the cited prior art.

Applicant asserts that any combination of AAPA in view of Lim et al. in further view of Beer et al. and in yet further view of Miyashita and Kawada et al. Applicant asserts that AAPA Lim et al. in further view of Beer et al. and in yet further view of Miyashita and Kawada et al. does not and cannot establish a *prima facie* case of obviousness under 35 U.S.C. § 103 regarding the claimed inventions of presently amended independent claim 1 because any combination of such cited prior art fails to teach or suggest all the claim limitations of the claimed inventions.

Turning to the cited prior art, AAPA teaches or suggests mounting a semiconductor die to a substrate and encapsulation.

Lim et al. teaches or suggests encapsulating a semiconductor device in a mold wherein the semiconductor device includes a semiconductor chip 40 having a spacer thereunder mounted on an interposer 45a having solder balls 47 attached to a surface of the interposer 45a.

Beer et al. teaches or suggests a data card 1 formed of epoxy resin having a chip 2 attached to a card 1 covered by a carrier 3 of glass fiber material having a surface thereof roughened by a laser beam to improve bonding to the card 1.

JP 11006073A teaches or suggests using a laser beam to remove a resist coated film while cutting and roughening the surface of a metal part being formed.

JP 403101141A removing an oxide film and contamination on the surface of a conductor 2 having bumps 6 on the tip thereof on a tape carrier 12 for heating and pressurizing the bumps 6 to bond to a layer 11 on the bond pad 8 of a semiconductor chip 5.

Applicant asserts that any combination of AAPA in view of Lim et al. in further view of Beer et al. and in yet further view of Miyashita and Kawada et al. does not and cannot establish a *prima facie* case of obviousness under 35 U.S.C. § 103 regarding the claimed invention of presently amended independent claim 1 because any combination of such cited prior art fails to teach or suggest all the claim limitations of the claimed inventions of presently amended independent claim 1 calling for "a semiconductor device having a plurality of bond pads located in the center of a surface thereof; and an interposer comprising silicon oxide coated silicon

having the same size as the semiconductor device and a centrally located aperture therein having a portion of a surface thereof connected to the semiconductor device having the plurality of bond pads of the semiconductor device located in the aperture of the interposer to allow the connection of the bond wires to the bond pads of the semiconductor device and to circuits of another surface of the interposer, the interposer having a laser roughened surface using a first laser at a first location increasing the surface area of a surface of the interposer to adhere mold material thereto in a molding operation, the surface roughened prior to the semiconductor device being attached to the interposer, the aperture in the interposer filled with mold material after the connection of bond wires between the bond pads of the semiconductor device and the circuits of the interposer". In contrast to the claim limitations of the claimed inventions, the AAPA merely teaches a semiconductor device on a substrate while Lim et al. teaches or suggests encapsulating a semiconductor device in a mold while Beer et al. teaches or suggests a data card 1 formed of epoxy resin having a chip 2 attached to a card 1 covered by a carrier 3 of glass fiber material having a surface thereof roughened by a laser beam to improve bonding to the card 1 while JP 11006073A teaches or suggests using a laser beam to remove a resist coated film while cutting and roughening the surface of a metal part being formed while JP 403101141A removing an oxide film and contamination on the surface of a conductor 2 having bumps 6 on the tip thereof on a tape carrier 12 for heating and pressurizing the bumps 6 to bond to a layer 11 on the bond pad 8 of a semiconductor chip 5. Applicant asserts that none of the cited prior art teaches or suggests a semiconductor device having a plurality of bond pads located in the center of a surface thereof; and an interposer comprising silicon oxide coated silicon having the same size as the semiconductor device and a centrally located aperture therein having a portion of a surface thereof connected to the semiconductor device having the plurality of bond pads of the semiconductor device located in the aperture of the interposer to allow the connection of the bond wires to the bond pads of the semiconductor device and to circuits of another surface of the interposer, the interposer having a laser roughened surface using a first laser at a first location increasing the surface area of a surface of the interposer to adhere mold material thereto in a molding operation, the surface roughened prior to the semiconductor device being attached to the interposer, the aperture in the interposer filled with mold material after the connection of

bond wires between the bond pads of the semiconductor device and the circuits of the interposer.

Applicant asserts that the only teaching or suggestion for such claim limitations is solely Applicant's disclosure, not the cited prior art. As such, Applicant asserts that any combination of the cited prior art cannot and does not establish a *prima facie* case of obviousness under 35 U.S.C. § 103 regarding the claimed invention of presently amended independent claim 1 because the cited prior art reference must teach or suggest all of the claim limitations, which it does not, and furthermore, the suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on Applicant's disclosure. Therefore, presently amended independent claim 1 and dependent claims 3 through 6 are allowable.

Applicant submits that claims 1 and 3 through 6 are clearly allowable over the cited prior art.

Applicant requests the allowance of claims 1 and 3 through 6 and the case passed for issue.

Respectfully submitted,



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